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SOURCE Uspekhi Khimii, Vol XVIII, No 1, 1949

## NEW CHEMISTRY BOOKS

1. Alekseyevskiy, Ye. V., Gol'ts, R. K., Musakin, A. P., "Quantitative Analysis," 512 pp, 16 rubles, 50 kopeck, Goskhimizdat, M.-L., 1948.

Third edition with corrections and additions by A. P. Masikin. Admitted by MVO as a manual for specialized chemical colleges.

2. Von Ardenne, M., "Physical Bases for Using Radioactive and Stable Isotopes as Indicators," translated from the German of I. Ya. Brandt, edited by I. M. Frank, 1,040 pp plus 1 insert, 8 rubles, 75 kopeck, Gos. Izd. Inostr. Lit., M., 1948.

Two methods are given: (1) with radioactive isotopes, and (2) with stable isotopes. A bibliography treating the above methods and their practical application is given at the end of the book.

3. Valezin, S. A., Vapannik, V. P., Putilova, I. N., "The Use of Inhibitors Against Acid Corrosion," 32 pp, 40 kopeck, Goskhimizdat, M.-L, 1948.

Description of methods of using corrosion-inhibitor substances which retard dissolution of metals in acids, chemical methods of cleaning rust and scale from metal (boilers, pipes, etc.) in industrial plants. Direction is given for preparations.

4. Burger, M., "Crystallography by Roentgenograms," translated from English by V. P. Tarasovaya and M. P. Shaskol'skaya, edited by M. M. Umanskiy, 484 pp plus 21 inserts, 33 rubles, 75 kopeck, Gos. Izd. Inostr. Lit., M., 1948.

Röntgenographic methods of studying crystal structure. Analysis of methods of determining space groups and methods of precise determination of the linear and angular parameters of crystals. Each method is illustrated by practical examples and calculations. Supplements by G. S. Zhdanov, V. D. Pospelov, N. S. Bazaryatskiy, and M. A. Umanskiy. It is generally recommended for X-ray specialists and students of physical specialties.

5. Berrer, R. "Scattering in Hard Bodies," translated from English by Z. S. Suvorovaya, edited by B. D. Tazulakhov, 504 pp plus 5 inserts, 28 rubles, 50 kopeck, Gos. Izd. Inostr. Lit., M., 1948.

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**CLASSIFICATION**

**CONFIDENTIAL**

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Results of research on scattering in hard bodies, chiefly, crystals and metals. Tables give the data on the porosity of various natural crystals, glass, fabrics, and paper. Book is based on material published before 1938 and, partly, in 1939-40.

6. Volova, Ye. D.; Ivanov, A. D., Deceased, Kurlyankin, I. A., Deceased, Mishchenko, K. P., Khamov, I. N., Deceased, Shmidt, L. L., "Handbook for Practical Work in Physical Chemistry," edited by Prof K. P. Mishchenko, 216 pp, 6 rubles, 50 kopeck, Goskhimizdat, M.-L, 1948.

7. Hertzberg, G. "Atomic Spectra and the Structure of Atoms," translated from Second Eng. Ed. by A. V. Savell'yev, edited by Ya. A. Smorodinsky, 276 pp, 17 rubles, 35 kopeck, Gos. Izd. Inostr. Lit., M, 1948.

Contents: Ch I. Simplest Ruled-Line Spectra and Principles of Atomic Theory, Ch II. Multiplet Structure of Ruled-Line Spectra, Ch III. Principle of the Formation of envelopes and the Periodic System of Elements, Ch IV. The More Complex Problems of Atomic Spectroscopy, Ch V. Superfine Structure of Spectral Lines, Ch VI. Some Experimental Data and Applications.

8. Glesston, S.; Leydaer, K.; Eyring, G., "The Theory of Absolute Velocities of Reactions. The Kinetics of Chemical Reactions, Viscosity, Scattering and Electrochemical Phenomena," translated from English under the editorship of A. A. Balandin and N. D. Sokolov, 608 pp, 39 rubles, Gos. Izd. Inostr. Lit., M, 1948.

A monograph devoted to the various main applications of the theory of absolute velocities of reactions (or theory of transitional states).

Contents: Ch I. Introduction, Ch II. Quantum Mechanics, Ch III. Potential Energy Surfaces, Ch IV. Statistical Calculation of Reaction Velocities, Ch V. Homogeneous Gas Reactions, Ch VI. Reactions Passing Through Excited States, Ch VII. Heterogeneous Processes, Ch VIII. Reactions in Solutions, Ch IX. Viscosity and Diffusion, Ch X. Electrochemical Processes.

9. Glinka, N. D., "General Chemistry," 608 pp plus 7 inserts, 17 rubles, 50 kopeck, Goskhimizdat, M.-L, 1948.

Fourth edition (stereotyped). Admitted by the MVO of the USSR as textbook for nonchemical specialties in the higher educational institutions.

10. Buben, I., "Methods in Organic Chemistry," Vol IV, No 1, Books 1, 2, translated from German, edited by A. Ya. Berlin, G. I. Braz, N. I. Gavrilov, and Ya. F. Komissarov, 1,284 pp, both books 60 rubles, Goskhimizdat, M.-L, 1948.

Contents of Books 1 and 2: Ch I. Cyanogen, Isocyanogen, Nitrile, Thiocyanogen, and Selenocyanogen, Ch II. Nitros Groups, Ch III. Nitro Group, Ch IV. Amino Group and Imino Group, Ch V. Tertiary Amines and Cyclic Bases. Bibliography up to 1947 is made use of in the handbook. The editorial staff has added supplements including bibliography through 1947 and part of 1948.

11. Jenkins, G., Hartung, U., "Chemistry of Organic Medical Preparations," translated from the Second Am. Ed., edited and supplemented by Prof O. Yu. Magidson, 756 pp, 36 rubles, Gos. Izd. Inostr. Lit., M, 1948.

Scientific manual of pharmaceuticals with a description of medicinal preparations. Chemical, pharmaceutical and therapeutical data are given. Information is given for individual preparations on the relation between physiological action and chemical structure.

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12. Johnson, V. S., Shennan, R. D., Read, R. A., "Organic Reagents in Organic Analysis," translated from English by N. M. Sovov'yevaya, edited by S. R. Sergienko, Dr of Chem Sci, 184 pp, 10 rubles 25 kopeck, Gos. Izd. Inostr. Lit., M, 1948.

13. Kol'tgof, I. M., Sendel, Ye. B., "Quantitative Analysis," 808 pp, 31 rubles, Goskhimizdat, M--L, 1948.

Translation of an amended and supplemented American edition of 1945. Editing and supplements by Prof Yu. Yu. Lur'ye.

14. Lipatov, S. M., "Physical Chemistry of Colloids," 376 pp, 12 rubles, 30 kopeck, Goskhimizdat, M--L, 1948.

Admitted by the MVO, USSR, as a textbook for chemical specialists in the higher schools.

15. "Data For a Bibliography of USSR Scientists, Series of Chemical Sciences,"

No 9, Il'ya Il'ich Chernyayev, introductory article by V. V. Lebedinskiy, bibliography compiled by N. M. Nesterovaya, 20 pp plus 1 insert, 2 rubles, Izd. AN SSSR, M--L, 1948.

16. No 11, Vladimir Mikhaylovich Rodionov, introductory article by M. M. Shemyakin, bibliographies compiled by N. M. Nesterovaya, 9 pp plus 1 insert, 1 ruble, 50 kopeck, Izd. AN SSSR, M--L, 1948.

17. "Organic Reactions," Collection 1 translated from English by M. A. Shlosberg, edited with supplements by A. Ya. Berlin, 528 pp, 60 kopeck, Gos. Izd. Inostr. Lit., M, 1948.

The collection contains 12 articles treating individual reactions widely used in organic synthesis. Main emphasis is placed on practical applications, observed factors, restricted use of this or that reaction, problems of the effect of the structure of raw materials, etc.

18. Peskov, N. P., Aleksandrova-Prays, Ne. M., "Course in Colloid Chemistry," Second Ed, 384 pp, 15 rubles, 50 kopeck, Goskhimizdat, M--L, 1948.

Textbook has been considerably revised and supplemented with recent advances in colloid science. Number of chapters have been rewritten. Book traces the role of Soviet scientists in the development of modern colloid chemistry. Admitted by the MVO, USSR, as a textbook.

19. "Reference Compendium, 'Chemistry and Treatment of Petroleum' Series," No 54, edited by M. D. Tilicheyev, Dr Chem Sci, Cen Sci Lib of the Petroleum Industry USSR, 44 pp, 2 rubles, Gostopkhisdat, M--L, 1948.

Works treating the physical and chemical bases of production and the use of petroleum products, the production of petroleum products, the use of petroleum products and the methods of analyzing petroleum products are contained in this compendium.

20. Rodionov, V. M., Bogoslovskiy, V. M., Fedorova, A. M., "Laboratory Handbook of the Chemistry of Intermediate Products and Dyestuffs," edited by Acad V. M. Rodionov, 212 pp, 12 rubles, Goskhimizdat, M--L, 1948.

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School manual illustrating laboratory work of importance in special processes, such as the chemistry of dyestuffs, organic technology and pharmaceutical chemistry. Admitted by the MVO, USSR, as a school manual for chemical, technological and textile faculties.

21. Roginskiy, S. Z., "Absorption and Catalysis on Nonhomogeneous Surfaces," Inst' of Phys Chem, 644 pp, 39 rubles, Izd. Acad Sci USSR, M--L, 1948.

The theory recently developed, chiefly in the USSR, of surface phenomena (absorption, heterogeneous catalysis) on nonhomogeneous surfaces. The book comprises data up to 1947 on work done in static theory of absorption and catalysis. Contents: Sec I. Nonhomogeneity of the Surface of Hard Real Bodies and the Static Method of Treating It, Sec II. Absorption, Sec III. Theory of Catalytic Processes.

22. Strizhevskiy, I. I., Fal'kevich, A. S., "Production of Acetylene From Calcium Carbide," 161 pp, 15 rubles, Goskhimizdat, 1948. (Second Edition revised with supplements.)

23. Unayants, T. P., "Dictionary of Fertilizers," 108 pp, 4 rubles, 75 kopeck, Goskhimizdat, M--L, 1948.

The dictionary contains about 350 names of fertilizers on each of which the following information is given: the principal and most commonly used name, chemical formula, appearance, chemical and other properties, short description of technological production, content in food substances for plants, conditions for application, and methods of storage.

24. Waters, U., "Chemistry of Free Radicals," translated from English by M. Ye. Dyatkinaya, edited by Prof. Ya. K. Syrkin, 320 pp, 20 rubles, 50 kopeck, Gos. Izd. Inostr. Lit., M, 1948.

Present state of knowledge concerning the mechanism of organic reactions involving free radicals. Experimental proof of the existence of free radicals by physical and chemical methods.

Contents: Ch I. Discovery of Free Radicals, Ch II. Physical Properties of Free Radicals, Ch III. Triphenylmethyl and Its Analogues, Ch IV. Free Radicals With Nitrogen and Metals, Ch V. Reactions of Free Atoms in the Gaseous Phase, Ch VI. Photochemical Decomposition, Ch VII. Reactions of free alkyl radicals, Ch VIII. Free Aryl Radicals and their reactions in solutions, Ch IX. Free Radicals as Catalysts, Ch X. Reactions With Metals, Ch XI. The Mechanism of Certain Oxidizing Reactions, Ch XII. The Mechanism of Biochemical Processes.

25. Welland, J. U. "The Resonance Theory and Its Application to Organic Chemistry," translated from English by M. E. Dyatkinaya, edited by Prof. Ya. K. Syrkin, 464 pp, 23 rubles, 20 kopeck, Gos. Izdat. Inostr. Lit., M, 1948.

Latest ideas on chemical structure in contemporary theoretical chemistry.

Contents: Ch I. The Resonance Theory, Ch II. The Nature of Valency, Ch III. Resonance Energy, Ch IV. Resonance and Steric Effects, Ch V. Resonance and Dipole Moments, Ch VI. Resonance and Molecular Spectra, Ch VII. Resonance and Chemical Equilibrium, Ch VIII. Resonance and Chemical Reactions. The appendix contains a table of interatomic scattering in organic molecules.

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26. Wells, A. F., "The Structure of Inorganic Substances," translated from English by A. Kh. Bregger and N. M. Nikolich, edited by Prof A. P. Vinogradov, 720 pp, 40 rubles, Gos. Izd. Inostr. Lit., M., 1948.

The modern theory concerning the spatial structure of nonorganic materials is stated. Values of atomic radii of valence angles and the sign of symmetry in crystals are introduced. Experimental methods used in determining the structure of materials are given. Study is made of the spatial structure of many classes of compounds: hydrides, halides, oxygen, sulfur, nitrogen, phosphorus, carbon, silicon, and boron.

27. "Chemistry of Isotopes, Second Handbook," translated from English by M. Ye. Dyatkinaya, edited by Prof Ya. K. Syrkin, 192 pp, Gos. Izd. Inostr. Lit., M., 1948.

Collection of translations of articles published in 1947-1948.

Contents: (1) B. G. Garvey, G. G. Hill, A. G. Maddock, E. G. Riley, "The Chemistry of Plutonium," (2) R. Bentley, "Use of Oxygen  $O^{18}$  as a Tracer Atom," (3) F. Halverson, "Use of Heavy Oxygen in the Study of Molecular Structure Through the Analysis of Oscillating Spectra," and (4) Siborg-Nuclear Transformations in High Energy Fields."

28. Chelintsev, G. B., "Outline of the Theory of Organic Chemistry," 10 rubles, Goskhimizdat, M.-L., 1948.

Contents: Ch I. Chemistry of Nitro-Organic Compounds, Ch II. Chemistry of Nitrogen Compounds, Ch III. Chemistry of Pseudomeric Compounds, Ch IV. Chemistry of Contact Compounds.

29. Evans, R., "Introduction to Crystallochemistry," translated from English with supplements by Ye. S. Markov, 368 pp, 23 rubles, Goskhimizdat, M.-L., 1948.

Critical analysis and generalization of the results of research on crystalline bodies by X-ray methods. A classification is introduced for crystallized materials according to types of chemical bonds (ionic, homeopolar, metallic, or van der Waal) as distinguished from the usual classification according to chemical composition and structural morphology.

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